

84  
conductor tracks.

**IN THE CLAIMS:**

85 7. (Twice amended) A network coupler as claimed in claim 1, characterized in that the primary coils are formed as metal strips (21, 22) which are led crosswise through a core (24).

**REMARKS**

All the pending claims 1 and 4-11 are rejected by the Examiner either under 35 U.S.C. §102(b) as being anticipated by, or under 35 U.S.C. §103(a) as being obvious over Dielacher, et al. (U.S. Patent No. 5,789,959). Claim 7 is further rejected under 35 U.S.C. §112 for a language deficiency. The Examiner also objects the Specification for improper language.

The applicants have amended the claim 7 and the Specification as above, which is believed to have overcome the language deficiencies as pointed out by the Examiner. Furthermore, the applicants respectfully traverse the rejections under 35 U.S.C. §102 and §103 as explained in detail below.

The present invention discloses a network coupler for transferring both energy and data over two lines. In particular, to prevent the data transfer from being disturbed by the energy transfer, the two primary coils are formed in such a way that a current flowing through the power supply point is divided into two equal currents flowing in the two lines, as expressly defined in claim 1.

The applicants do not agree with the assertion of the Examiner that claim 1 is anticipated by Dielacher. In particular, Dielacher does not teach or imply that the energy is divided into two equal currents in the two lines. Dielacher teaches a technique to decouple a direct voltage and alternating data signal from the two main lines, in which the direct voltage is tapped from the two lines through a tapping circuitry. Dielacher does teach that the component parameters of the pair

of diodes 30, 31, resistors 35, 36 and the transistors 32, 33 in the tapping circuitry match each other as well as possible, so that differential useful signals do not become operative in the drive of the transistors 32, 33 (see col. 4, lines 29-35). However, there is no mention or implication throughout the disclosure in Dielacher that the currents in the main lines (1, 2) shall be equal, which will prevent the data transfer to be disturbed by the fluctuations of the power supply current, as taught in the present invention. In fact, Dielacher tries to prevent the disturbance to the data transfer by the high-impedance connection (of transistors 32, 33) between lines 1 and 2 (see col. 4, line 66 – col. 5, line 5). Thus, Dielacher does not imply that the currents in the two main lines 1, 2 shall be equal so as to prevent disturbance on data transfer. Therefore, the applicants believe claim 1 is not anticipated by Dielacher and thus is patentable under 35 U.S.C. §102(b).

At least for the same reasons, claims 4-11 are also patentable as having all the limitations in claim 1. Furthermore, the applicants do not agree with the assertion of the Examiner that the feature in claim 8 that both the two primary coils and the secondary coils are provided on a two-layer plate is obvious over Dielacher, since such a novel structure, which further simplifies the construction of the network coupler (see page 6, lines 22-23), can not be found anywhere in Dielacher or other prior art. Therefore, this feature further strengthens the patentability of claim 8.

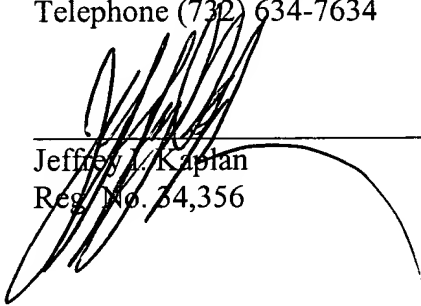
Reconsideration is here respectfully requested in view of the amended claims and the above remarks. The Examiner is authorized to deduct additional fees believed due from our Deposit Account No. 11-0223.

Applicants respectfully inform the Examiner that a related application (Serial No. 09/660,915) of the same applicants is also under examination in the USPTO. The Examiner is requested to consider that proceeding, including art cited therein.

Respectfully submitted,

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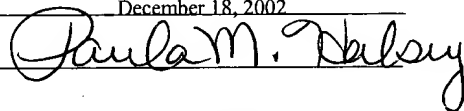
  
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**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal service as first class mail, in a postage prepaid envelope, addressed to Box Non-Fee Amendment, Commissioner for Patents, Washington, D.C. 20231 on December 18, 2002.

Dated December 18, 2002

Signed



Print Name Paula M. Halsey

## **MARKED-UP VERSION OF THE AMENDED SPECIFICATION AND CLAIM 7**

### **IN THE SPECIFICATION:**

Page 2, paragraph 3, replace with:

An embodiment of the network coupler according to the invention, [as defined in claim 2,] is characterized by such a simple structure but can nevertheless fulfill the above-mentioned conditions, in which the network coupler comprises a first primary coil having a first terminal which is coupled to the first line of the network, and a second primary coil having a first terminal which is coupled to the second line of the network, and in which the two second terminals of the first primary coil and the second primary coil are interconnected at a power supply point which supplies a power supply voltage, and in which the network coupler comprises a secondary coil by means of which data can be coupled into or out of the two lines of the network, and in which the two primary coils and the secondary coil of a core are magnetically coupled together. The two first and second primary coils which have the same resistance or impedance are used, on the one hand, for coupling out energy from the two lines of the network. This is effected symmetrically, i.e. currents which flow in response to the coupling-out of energy are divided into equal currents on the two lines.

Page 2, paragraph 5, replace with:

To achieve the symmetrical coupling-out as described above, the two primary coils are advantageously formed [as defined in claim 3] in such a way that a current flowing through the power supply point is divided into two equally large currents flowing in the two lines of the network. In the simplest case, this can be achieved by manufacturing the windings of the same material and giving them the same cross-section, length and the same number of turns[, as defined

in claim 4].

Page 2, paragraph 6, replace with:

The ratio of turns between the number of turns of the primary coils and the number of turns of the secondary coil defines the voltage ratio of the differential voltage at the terminals of the secondary coil. It has been proved to be advantageous, as in a further embodiment of the invention[, defined in claim 5,] that the secondary coil has a higher number of turns than the primary coils.

Page 3, paragraph 1, replace with:

A further advantageous construction of the coils is that they are provided as a printed circuit on a two-layer plate[, as defined in claim 8] on which both the two primary coils and the secondary coils are printed as conductor tracks.

#### **IN THE CLAIMS:**

7. (Twice amended) A network coupler as claimed in claim 1, characterized in that the primary coils are formed as metal strips (21, 22) which are led crosswise through [the] a core (24).